

**LOWRY LANDFILL Superfund Site****Five-Year Review Interview Form**Site Name: LOWRY LANDFILLEPA ID No.: COD980499248Interviewer Name: Katherine JenkinsAffiliation: EPASubject Name: Steve Richtel (Waste Management) and Dave Wilmoth (Denver)Affiliation: WSD**Subject Contact Information:**Time: 3:00 p.m.Date: 10/27/2016

Interview Location:

Interview Format (circle one):      In Person      Phone      Mail      Other: Email

Interview Category:      Potentially Responsible Parties (PRPs)

## 1. What is your overall impression of the remedial activities at the Site?

Steve: Thorough. Precise. Well-documented. Effective. We've done some pretty innovative things and we should be recognized for that. Running the bio treatment plant to remove 1,4-dioxane. We have done several voluntary actions above what remedy required. We've gone beyond protective. In response to a CLLEAN request we installed 10 LFG extraction wells screened only at bottom of landfill to try to remove gas deep in landfill. Not required by EPA or regulation. It was a good faith gesture to CLLEAN. We also installed an EW at MW38 sand channel headwaters and it still runs today. We were way ahead of agency of the north end plume investigations.

Dave: The remedy overall is functioning as intended, and is protective and effective as the past FYRs have found. Regarding innovative actions that Denver and WM have implemented, I would include the landfill gas-to-energy plant. It was the first plant in Colorado and takes a waste and creates a beneficial use out of it. Not just treating the gas, but provides electricity to the community. Denver and WM's acquisition of the buffer property went above and beyond to control the land uses surrounding the Superfund site. We didn't want residential neighborhoods up against the landfill. It was a community relations issue and not required by the Site's Record of Decision. We also acquired the groundwater rights around the site so that the groundwater flow regime within area was controlled. A groundwater user can't put in a well that could cause groundwater to change course. It's an additional step that Denver and WM felt was an appropriate protective measure to ensure the remedy is protective.

## 2. What have been the effects of this Site on the surrounding community, if any?

Dave: What we found is that the community at large is not aware of Lowry Landfill. It's just a grassy field with signs and fencing, but it's adjacency to DADS makes it seem it's part of the modern-day landfill. Some have memories of going to landfill to throw away trash but most people are relatively new to the area. In the past, there were small farms and ranchettes, but these have been replaced with new residential subdivisions in the past 20 years. I don't think there are any impressions of negative effects in the public's mind and that there is a relatively low level of basic knowledge of the site. I think that residents are generally aware that it's a Superfund site, EPA and CDPHE are involved, and it's been cleaned up. Whether know or not, I think much of the public is positively affected. We are working with Arapahoe County for expansion of the Gun Club Rd and Quincy intersection to improve traffic flow and mitigate growing congestion. Arapahoe County is beginning construction next year to ease traffic congestion in the area (purchasing a portion of the buffer properties). Xcel is expanding its substation south of the Superfund site on buffer property. This new substation will be an entry point for electricity from a wind farm in eastern Colorado. Just a couple years ago, we sold buffer property to Arapahoe Parks

and Rec District (a special district) which they plan to build a regional park facility with baseball fields and a recreation center to expand recreational opportunities in the community. They're raising funds to do the improvements. Right now it has public access as part of a trail system. We're looking at these types of things to address community needs and public benefits. Our goal with the buffer properties are to protect the remedy first, but it doesn't mean all land uses are prohibited on the properties. We look at the proposed use and how its compatible with the protectiveness of site and the public's need, such as a need for regional park facilities. Impact is positive as we're working with community and giving back.

Steve: It has a big impact on land use in area. Residential use has not occurred very close to the Site because of the Trust buffer property. We work with other impacted stakeholders who are involved in infrastructure. The Superfund site has provided jobs, economic development in purchasing of goods and services. We've tried to do a really good job with reaching out to the public and keeping them informed. Water quality issues are not in the front of minds in community because of what work we've done there. Eventually it will be a very large piece of land that needs to be worked back into functional use.

3. What is your assessment of the current performance of the remedy in place at the Site?

Steve: The remedy is extremely effective. I know that community group points to excursions outside of established compliance zone as remedy failure, but it's not remedy failure. The zone was set up by EPA in known areas of contamination. The monitoring plan includes mechanisms to deal these issues. We're pulling back plumes, they're shrinking and contaminants are being reduced. Our teams have been effective at dealing with regulatory change. We quickly adjusted before 1,4-dioxane levels changed.

Dave: Lowry has a long history and there is an abundance of site information. The information tells you that the site has functioned well. The slurry wall that's been in operation since 1997 has shown itself to be very effective at both preventing groundwater contamination as well as containing the high levels of contamination in the landfill mass. Denver and WM have been on the forefront of 1,4-dioxane as an emerging contaminant through the development of newer analytical methods and innovative treatment technologies. Academic and professional case studies and peer-reviewed papers include work we have done at Lowry on addressing the contaminant. In Colorado we've been well out front of other Colorado sites that are just now beginning to address 1,4-dioxane.

4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup?

Dave: Other than CLLEAN, I'm not.

Steve: We have reached out time and time again to residents in area to inform them and we haven't received any complaints. We once had a meeting with residents potentially most impacted by offsite groundwater, and residents wanted to talk about Gun Club Rd traffic and odor off DADS, etc. We have had inquiries from high schools, elementary schools, etc. There is interest in the process and we provide tours and education. CU Denver, as well as Metro State, college students are interested in the bioplant. We've given tours to boy scouts of America and scientists have written papers on this remedy.

5. Do you feel the community is well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?

Steve: We have a website we keep current, we've done mailers, we've done community meetings, community events, booths as Arapahoe County fairground, HOA Meetings etc. We're active members of Tri-County Steering committee which informs the community through government. The frequency of outreach has decreased as is natural for a site that's 20 years in O&M.

Dave: The Tri-County Health Department's steering committee affords an opportunity for stakeholders throughout the community (City, County, Plains Conservation, etc.) to talk about things going on in the area like development plans and traffic congestion, and how we can collaborate. It's not just about groundwater flow and contamination, but bigger picture issues. The meetings also allow stakeholders to stay informed and can collaborate to find solutions to bigger picture community issues. Keeping lines of communication open between local governments, EPA, Denver, and WM is critical. Communication used to be an issue, but that's no longer the case. Our experience has been that the feedback we get during outreach is not Superfund related, rather related to other community issues outside of our realm of influence.

6. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

Dave: I do not.

Steve: Regarding EPA's management of the Site, it has been a difficult site for the agency to deal with. We're on our 7<sup>th</sup> or 8<sup>th</sup> RPM in 20 years. Given the complexity of understanding the hydrogeology of the Site, it is difficult to get up to speed. We don't want it to be a training ground for future RPMs. Given the active citizens group, it's no place for people afraid of those types of situations. There is a certain level of maturity and skill set to deal with it. EPA should be proud of itself. This was a highly contentious and dangerous site in 60s and 70s and it is not anymore. It's a well-managed, contained, understood site and PRPs, Denver, Waste, EPA has a lot to be proud of.